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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,888	07/11/2000	MATS LEIJON	705/72449-2	9176

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EXAMINER
ENAD, ELVIN GENARGUE

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 12/14/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/554,888	Applicant(s) Leijon et al.
	Examiner Elvin Enad	Art Unit 2834

-- ***The MAILING DATE of this communication appears on the cover sheet with the correspondence address*** --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under ***Ex parte Quayle***, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-26* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. Receipt is acknowledged of the information disclosure statement papers filed on July 11, 2000. The papers have been placed in the application file. A signed copy of the IDS will be provided when application is allowed.

Specification

2. The disclosure is objected to because of the following informalities: Applicant's specification refers to claims on pages 1, 4, 5,...etc. for completeness. The specification should not refer to the claims for supporting information. Appropriate correction is required

Claim Rejections - 35 USC § 112

3. Claim 26 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear which features defined for the generator in the plant applicant is referring to.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,9,10,12 and 25 are rejected under 35 U.S.C. § 102(b) as being fully anticipated by Lauw et al. (USP 4,994,684).

Lauw et al. disclose a device and method to control the conversion of an arbitrary resource energy into mechanical energy and subsequently into electric energy with a variable-speed generation system utilizing a turbine and a doubly-fed generator connected directly to a power grid. The energy conversion system comprises a variable speed generation system including turbine means for converting a resource energy input from the resource into mechanical energy at a rotor speed. The system also includes energy converter means for producing excitation power, and a doubly fed generator coupled to the turbine means. The doubly fed generator includes a stator with stator windings to supply the electrical power output directly to the power grid.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-7,11,13-24 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lauw et al. (USP 4,994,684) in view of Elton et al. (USP 5,036,165).

Lauw et al. disclose the claimed invention except for utilizing a stator winding comprised of at least one semiconducting layer around the conductor. Lauw et al. disclose a device and method to control the conversion of an arbitrary resource energy into mechanical energy and subsequently into electric energy with a variable-speed generation system utilizing a turbine and a doubly-fed generator connected directly to a power grid. The energy conversion system comprises a variable speed generation system including turbine means for converting a resource energy input from the resource into mechanical energy at a rotor speed. The system also includes energy converter means for producing excitation power, and a doubly fed generator coupled to the turbine means. The doubly fed generator has a rotor with excitation rotor windings and with means for applying the excitation power from the energy converter means to the rotor windings. The rotor is driven by the mechanical energy from the turbine means. The doubly fed generator also includes a stator with stator windings to supply the electrical power output to the power grid. The generation system also includes control means for varying the rotor speed in response to the power output and the resource energy input to increase the ratio of the electrical output power to the resource energy input received from the resource.

Elton et al. disclose an electrical cable provided with an internal grading layer of semi-conducting pyrolyzed glass fiber layer in electrical contact with a cable conductor. In an alternate embodiment, Elton et al. disclose an electrical cable provided with an exterior layer of internal grading layer of semi-conducting pyrolyzed glass fiber layer in contact with an exterior cable insulator having a predetermined reference potential. Furthermore, note that Elton et al. teach that it is known to provide a semiconducting layer in the insulation of a conductor and to connect

that layer to a fixed potential in order to provide an equipotential surface on the conductor preventing corona discharge around the conductors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the cable winding as taught by Elton et al. to the dynamo electric machine of Shildneck since such a modification according to Elton et al. would prohibit the development of corona discharge. Elton et al. further teach in column 2, lines 42-48 that having a semiconducting layer would bleed off any static electric discharge or electric discharge developed on the exterior surface of the insulation.

8. In regard to forming the semiconducting layer with the same coefficient of thermal expansion as that of the insulation layer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed these layers with similar coefficients since it was known in the art that the expansion rate of the two layers would be the same and this is desirable in order to prevent cracking of the insulation and wear between the two.

9. In regard to the various grounding methodologies in the system, as recited in claims 13 and 14, the choice of the particular configuration would have been an obvious matter of design choice, the selection contingent upon the requirements of the application. For instance, parameters such as high resistance grounding, resonant or inductive grounding are commonly known alternatives. Examples of commonly known grounding techniques are described in IEEE

C62.92-1989, IEEE Guide for the Application Of Neutral Grounding in Electrical Systems, Part II. (IEEE, New York, USA, September 1989).

10. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lauw et al. (USP 4,994,684) in view of Elton et al. (USP 5,036,165) in view of Takaoka et al. (USP 5,094,703).

Lauw et al. and Elton et al. disclose the claimed invention except for a teaching of having the generator with windings comprising a plurality of insulated conductive elements and an at least one uninsulated conductive elements.

Takaoka et al., as seen in figures 7,8,10 and 11 teach having a stranded conductor for an electrical cable comprising a combination of uninsulated stranded conductor and an insulated stranded conductor.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the windings of Elton et al. comprised of insulated and uninsulated electrical conductor strands as taught by Takaoka et al. since such a modification according to Takaoka et al. would reduce the amount of insulation needed and the number of electrical connections required in the end windings.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvin Enad whose telephone number is (703) 308-7619. The examiner can normally be reached on Monday-Friday from 8:00AM to 4:00PM.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez, can be reached on (703) 308-1371. The fax phone number for this Tech Center group is (703) 305-3431(32).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Elvin Enad
Primary Examiner
Art Unit 2834
12.08.2001